



4/14 1632

PATENT  
ATTORNEY DOCKET NO. UCSD1330-2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Palsson et al. Art Unit: 1632  
Serial No.: 10/087,441 Examiner To be assigned  
Filed: March 1, 2002  
Title: MODELS AND METHODS FOR DETERMINING SYSTEMIC PROPERTIES  
OF REGULATED REACTION NETWORKS

Commissioner for Patents  
Washington, D.C. 20231

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TRANSMITTAL SHEET

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Sir:

Transmitted herewith for the above-identified application, please find:

- (1) An Information Disclosure Statement (2 pages);
- (2) A Form PTO-1449 (3 pageS);
- (3) Twenty-one (21) References;
- (4) Return postcard;

**CERTIFICATION UNDER 37 CFR §1.8**

I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on this date, June 13, 2002 in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

JASON BERRY

Name of Person Mailing Paper Jason Berry

Signature Jason Berry

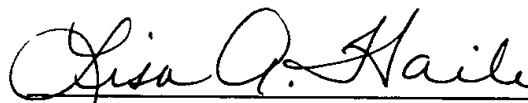
In the Application of  
Palsson et al.  
Application Serial No.: 10/087,441  
Filed: March 1, 2002  
Page 2

PATENT  
Attorney Docket No.: UCSD1330-2

This Information Disclosure Statement is being filed prior to receipt of a First Office Action on the merits. Therefore, no fee is deemed necessary. However, the Commissioner is hereby authorized to charge any amounts required by this filing, or credit any overpayment, to Deposit Account No. 50-1355.

Respectfully submitted,

Date: 6/13/02

  
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**United States Patent & Trademark Customer No. 28213**



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ATTORNEY DOCKET NO. UCSD1330-2

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Applicants: Palsson et al.

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Art Unit: 1632

Examiner To be assigned

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Plunkett  
9/23/02

Commissioner for Patents  
Washington, D.C. 20231

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INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. 1.97, enclosed are references relating to the above-identified application. For the convenience of the Examiner, these references are listed on the attached Form PTO-1449 and a copy of each is enclosed herewith.

It is respectfully requested that these references be considered in the examination of this application and their consideration be made of written record in the application file.

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Name of Person Mailing Paper Jason Berry

Signature Jason Berry

In the Application of

Palsson et al.

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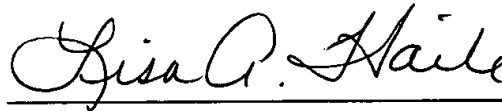
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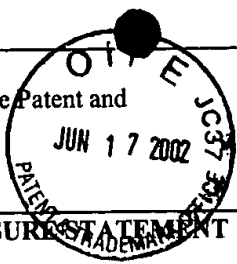
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<b>FORM PTO-1449</b> U.S. Department of Commerce Patent and Trademark Office	<b>Docket No. (Optional)</b> UCSD1330-2	<b>Serial No.:</b> 10/087,441
	<b>Applicant(s):</b> Bernhard O. Palsson et al.	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	<b>Filing Date:</b> March 1, 2002	<b>Group Art Unit:</b> Unassigned



### U.S. PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE

### FOREIGN PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION (YES/NO)
	AA	WO 00/46405	8/10/2000	PCT			

### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)

	AB	Covert et al., "Regulation of Gene Expression In Flux Balance Models of Metabolism," <i>J. Theor. Biol.</i> , Vol. 213, 2001, pgs. 73-78
	AC	Covert, Markus W. et al., "Metabolic Modeling of Microbial Strains In Silico," <i>Trends in Biochemical Sciences</i> , Vol. 26, 2001, pgs. 179-186.
	AD	Edwards, Jeremy S. et al., "In Silico Predictions of Escherichia Coli Metabolic Capabilities are Consistent With Experimental Data," <i>Nature Biotechnology</i> , Vol. 19, February 2001, pgs. 125-130
	AE	Edwards, Jeremy S. et al., "Characterizing the Metabolic Phenotype: A Phenotype Phase Plane Analysis," <i>Biotechnology and Bioengineering</i> , Vol. 77, No. 1, January 5, 2002, pgs.27-36.
	AF	Edwards and Palsson, "The Escherichia Coli MG1655 In Silico Metabolic Genotype: Its Definition, Characteristics, and Capabilities," <i>Proc. Nat'l Acad. Sci. USA</i> , Vol. 97, No. 10, May 9, 2000, pgs. 5528-5533.
	AG	Edwards and Palsson, "Systems Properties of the Haemophilus Influenzae Rd Metabolic Genotype," <i>The Journal of Biological Chemistry</i> , Vol. 274, No. 25, June 18, 1999, pgs. 17410-17416.

EXAMINER	DATE CONSIDERED
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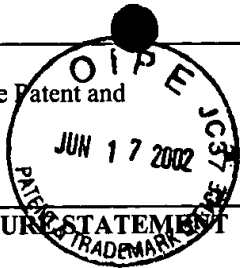
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AH	Fell and Small, "Fat Synthesis In Adipose Tissue: An Examination of Stoichiometric Constraints," <i>J. Biochem.</i> , Vol. 238, 1986, pgs. 781-786.
AI	Majewski and Domach, "Simple Constrained-Optimization View of Acetate Overflow In E. Coli," <i>Biotechnology and Bioengineering</i> , Vol. 35, 1990, pgs. 732-738.
AJ	Palsson, Bernhard, "The Challenges of In Silico Biology: Moving From A Reductionist Paradigm To One That Views Cells as Systems Will Necessitate Changes In Both the Culture and the Practice of Research," <i>Nature Biotechnology</i> , Vol. 18, November 2000, pgs. 1147-1150.
AK	Schilling, Christophe H. et al., "Theory For the Systemic Definition of Metabolic Pathways and Their Use In Interpreting Metabolic Function From A Pathway-Orientated Perspective," <i>J. Theor. Biol.</i> , Vol. 203, 2000, pgs. 229-248.
AL	Schilling, Christophe H. et al., "Assesment of the Metabolic Capabilities of Haemophilus Influenzae Rd Through A Genome-Scale Pathway Analysis," <i>J. Theor. Biol.</i> , Vol. 203, 2000, pgs. 249-283.
AM	Schilling, Christophe H. et al., "Combining Pathway Analysis With Flux Balance Analysis for the Comprehensive Study of Metabolic Systems," <i>Biotechnology and Bioengineering</i> , Vol. 71, No. 4, 2000, pgs. 286-306.
AN	Schilling, Christophe H. et al., "Toward Metabolic Phenomics: Analysis of Genomic Data Using Flux Balances," <i>Biotechnol. Prog.</i> , Vol. 15, 1999, pgs. 288-295.
AO	Schilling, Christophe H. et al., "Metabolic Pathway Analysis: Basic Concepts and Scientific Applications In the Post-Genomic Era," <i>Biotechnol. Prog.</i> , Vol. 15, 1999, pgs. 296-303.
AP	Schilling and Palsson, "The Underlying Pathway Structure of Biochemical Reaction Networks," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 95, April 1998, pgs. 4193-4198.
AQ	Thomas, R., "Logical Analysis of Systems Comprising Feedback Loops," <i>J. Theor. Biol.</i> , Vol. 73, 1978, pgs. 631-656.
AR	Thomas, Rene, "Boolean Formalization of Genetic Control Circuits," <i>J. Theor. Biol.</i> , Vol. 42, 1973, pgs. 563-585.

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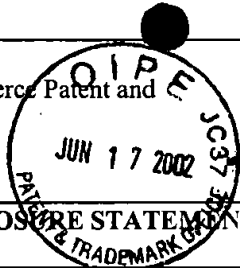
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AS	Vanrollegham, Peter A. et al., "Validation of a Metabolic Network for Saccharomyces Cerevisiae Using Mixed Substrate Studies," <i>Biotechnol. Prog.</i> , Vol. 12, 1996, pgs. 434-448.
AT	Varma and Palsson, "Metabolic Flux Balancing: Basic Concepts, Scientific and Practical Use," <i>Biotechnology</i> , Vol. 12, October 1994, pgs. 994-998.
AU	Varma and Palsson, "Stoichiometric Flux Balance Models Quantitatively Predict Growth and Metabolic By-Product Secretion In Wild-Type Escherichia Coli W3110," <i>Applied and Environmental Microbiology</i> , Vol. 60, No. 10, October 1994, pgs. 3724-3731.

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